CLAIMS

This listing of claims replaces all prior listings.

1-6. (Cancelled).

7. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

forming a first set of gel-electrolyte layers on both sides of a positive electrode collector;

forming a second set of gel-electrolyte layers on both sides of a negative electrode collector;

forming a positive electrode comprising the first set of gel-electrolyte layers on both sides of the positive electrode collector;

forming a negative electrode comprising the second set of gel-electrolyte layers on both sides of a negative electrode collector;

laminating said positive electrode and said negative electrode such that one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;

winding said positive electrode and said negative electrode such that another one of the first set of gel-electrolyte layers and one of the second set of gel-electrolyte layers face each other;

inserting ~~and sealing~~ said wound electrodes into a film pack;

<u>welding an outermost end of the film pack to seal the wound electrodes therein;</u> and

after inserting and sealing said wound electrodes into the film pack, subjecting said wound electrodes to heat treatment so that each of the first set of gel-electrode layers and the one of the second set of gel-electrolyte layers facing each other are integrated with each other into one continuous seamless layer,

wherein,

said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a swelling solvent serving as a plasticizer,

said gel-electrolyte layers comprises $LiPF_6$,

the positive electrode has a density of 3.6 g/cm^3 and the negative electrode active material has a density of 1.6 g/cm^3,

said matrix polymer includes polyvinylidene flouride and polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than 1 mS/cm at room temperatures.

8-9. (Canceled).

10. (Original) The method of claim 7, wherein said wound electrodes are subjected to heat treatment for ten minutes.

11-12. (Cancelled)

13. (Previously Presented) The method of claim 7, wherein said nonaqueous solvent is selected from the group consisting of ethylene carbonate, propylene carbonate, butylene carbonate, γ-butylolactone, γ-valerolactone, diethoxyethane, tetrahydrofuran, 2-methyltetrahydrofuran, 1, 3-dioxane, methyl acetate, methyl propionate, dimethylcarbonate, diethyl carbonate or ethylmethyl carbonate or their mixture.

14.-16. (Cancelled)

17. (Currently Amended) A method of manufacturing a solid-electrolyte battery comprising:

forming gel-electrolyte layers on both sides of a positive electrode and a negative electrode, wherein one of said solid-electrolyte layers formed on said positive electrode and one of said gel-electrolyte layers formed on said negative electrode face each other;

winding said positive electrode and said negative electrode after pressing;

inserting ~~and sealing~~ said wound electrodes into a film pack;

welding an outermost end of the film pack to seal the wound electrodes therein; and

after inserting and sealing said wound electrodes into the film pack, subjecting said wound electrodes to heat treatment so that said gel-electrolyte layers formed on said positive electrode and said gel-electrolyte layers formed on said negative electrode are integrated with each other into one continuous seamless layer,

wherein,

said gel-electrolyte layers comprise an electrolyte salt, a matrix polymer, and a swelling solvent serving as a plasticizer

said gel-electrolyte layers comprises $LiPF_6$[[;]],

the positive electrode has a density of 3.6 g/cm^3 and the negative electrode active material has a density of 1.6 g/cm^3,

said matrix polymer includes polyvinylidene flouride and polyhexafluoropropylene, and

the matrix polymer has an ion conductivity higher than 1 mS/cm at room temperatures.